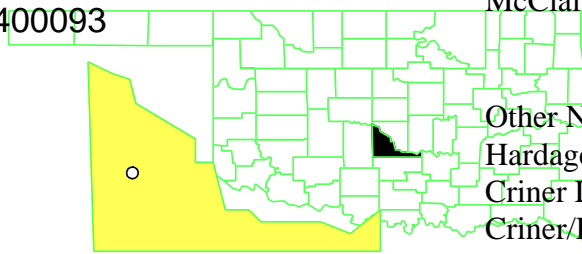


HARDAGE/CRINER OKLAHOMA

EPA ID# OKD000400093
Site ID: 0600988

EPA REGION 6
CONGRESSIONAL DISTRICT 04
McClain County



Other Names:
Hardage Landfill
Criner Landfill
Criner/Hardage Waste Disposal

Updated: April 2005

Site Description

Location: 3/4 mile west of Criner, Oklahoma, on Highway 122, 30 miles southwest of Oklahoma City, McClain County.

Population: Approximately 20 within a 1 mile radius of the site.

Setting: Rural, agricultural area; nearest residence is at site boundary.

Hydrology: Bedrock is fractured shale/sandstone; fracturing contested by Potentially Responsible Parties (PRPs). The Site is adjacent to (but not on) North Criner Creek floodplain. The North Criner Creek alluvial aquifer is a source for drinking water remote downstream.

Present Status and Issues

- Hardage Site Remedy is in the Operation and Maintenance Phase.
- EPA completed the 5-year Review of the Court-ordered Hardage Site Remedy in September 2002. The remedy was found to be currently protective of human health and the environment.

Wastes and Volumes

<u>Waste</u>	<u>Ground Water</u>	<u>Soil</u> (parts per million)
1,2 - dichloroethane	350 ppm	180 ppm
1,1,2 - trichloroethane	54 ppm	170 ppm
tetrachloroethane	24 ppm	16,000 ppm
trichloroethene	36 ppm	1,500 ppm
toxaphene	---	160 ppm

Other site contaminants include arsenic, solvents, pesticides, Polychlorinated Biphenyls (PCBs), oils, paint sludge, ink, and heavy metals.

Volumes in the 60 acre permitted area includes:

- Main pit: Two acres, 15-20 feet thick.
- Liquids - 1,800,000 gallons

- Waste fill/sludges 174,000 cubic yards
- Sludge mound: 1.5 acres, 15-20 feet thick.
- Drum mound: 0.8 acres, 30-40 feet thick; may contain over 20,000 drums.

Site Assessment and Ranking

NPL LISTING HISTORY

Site HRS Score: 51.01

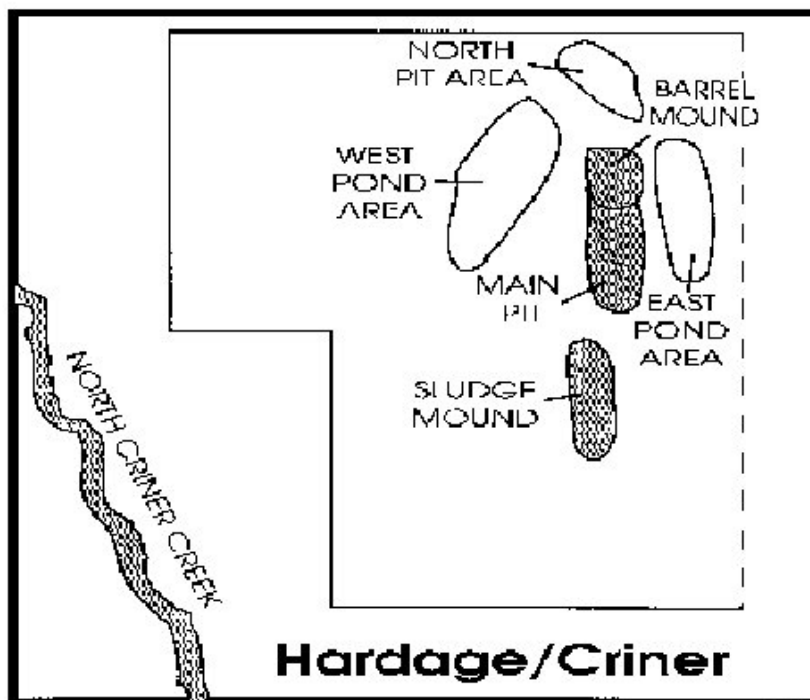
Proposed Date: 10/81

Final Date: 9/08/83

NPL Update: No. 1

- Site Assessment conducted 1980. EPA filed suit in 1980, expanded suit in 1982 to include CERCLA Section 106. Site Operator had permit issued by the Oklahoma State Department of Health (OSDH), now Oklahoma Department of Environmental Quality (ODEQ). Site was fenced and access restricted by operator.

Site Map and Diagram



Site History:

- Waste pits received bulk, drummed liquids, and sludges.
- The site was divided into source control and management of migration operable units in 1985.
- The Hardage Steering Committee (HSC), a group of potentially responsible parties (PRPs) performed studies on site from fall 1986 through 1988, proposing a cap and slurry wall contrary to EPA's Record of Decision (ROD) signed in November of 1989.
- September - November 1987, the Potentially Responsible Party (PRP) provided an alternate water supply to residents southwest of the site.
- March 1988, PRP erected a fence at the site to restrict public access.
- Court opinions on liability, past costs and remedy were rendered August 9, 1990. Liability and past costs were decided in favor of the United States while the court selected the PRP proposed remedy.
- The liable parties filed appeals over past costs and one party appealed its liability; however, the decisions were upheld.
- Contaminant seeps have been documented on site and are covered when found. Seeps in the borrow pit area have forced the PRPs to investigate additional methods for collecting ground water for treatment and deep well injection.
- EPA conducted an inspection of selected recovery wells located in the mound recovery area in October 2001. The inspection documented that the selected recovery wells were constructed according to their individual design plans.
- Citizens interviews regarding the performance of the implemented remedy were held on December 4, 1999 at the HSC Field House in Lindsay, Oklahoma (1/4 mile from the entrance to the Hardage Site). A second meeting was hosted by the Hardage contractors on February 26, 2002, with EPA and ODEQ present to address questions from the local community regarding operational concerns at the facility.

Health Considerations:

- Contamination of surface water, ground water, and surface soils has been documented.
- Potential for human exposure via direct contact, ingestion of contaminated soils, and inhalation of contaminants.

Record of Decision

Signed: November 22, 1989
Opposed by ODEQ and PRPs

- The Hardage Record of Decision (ROD) was signed by U.S. EPA in November 1989, just prior to the trial. However, both the ODEQ and the PRP group, the Hardage Steering Committee, opposed the EPA chosen remedy.
- The issue was decided in Federal District Court in favor of the HSC.
- The project has moved forward under a court-ordered remedy in lieu of a traditional ROD.
- The remedy is split into two operable units, one for source control and the second for ground water migrating off-site.

Source Control:

- Institutional Controls to restrict access.
- Recovery of all pumpable liquids.
- Separation of the phases recovered by an on-site separation system.
- Off-site incineration of the phases recovered.
- Eventual cap of the source area.

Ground Water:

- Recovery of ground water migrating through the source area via a large trench.
- Recovery of ground water down-gradient from the source area via recovery wells.
- Cleaning the recovered water by air stripping and filtration.
- Water to be cleaned to standards applicable for discharge to North Criner Creek.
- Fencing and capping activities to date have been implemented by the PRPs.
- By order of Federal District Court, all Remedial Design and Remedial Action (RD/RA) activities will be under a single schedule.

Community Involvement

- Community Involvement Plan: Developed 5/88
- Open houses and workshops: 2/90
- Original Proposed Plan: 3/86
- Subsequent Proposed Plan and Public Meeting: 10/89
- ROD Fact Sheet: 1/90
- Milestone Fact Sheets: 2/90 (RD/RA); 11/29/99 (Announcement of 5-Year Review of implemented remedy performance)
- Citizens on site mailing list: 152
- Constituency Interest: Concerned with ground and surface water contamination
- Site Repository: Purcell City Library, 919 North 9th Street, Purcell, OK 73080

Technical Assistance Grant

- Availability Notice: None - Pre-SARA site, little organized community interest, no identified citizens groups in site area (rural setting).
- Letters of Intent Received: None
- Final Application Received: N/A
- Grant Award: N/A
- Current Status: No TAG activity

Contacts

- **EPA Remedial Project Manager:** Michael A. Hebert, 214/665-8315
- **State Contact:** Hal Cantwell, (405) 271-7158.
- **EPA Community Involvement Coord.:** Michael A. Hebert, 214/665-8315
- **EPA Attorney:** James L. Turner, 214/665-3159
- **EPA Region 6 Ombudsman:** Arnold Ondarza, 303-312-6777
- **EPA State Coordinator:** Roberta Hirt, 214/665-8079
- **EPA Oversight Prime Contractor:** currently no "contract" oversight being conducted.
- **PRP's On-site Contractor** (Operation & Maintenance): Nationwide Environmental Services, Mr. Benjamin Costello, (303) 232-2134.
- **EPA Ombudsman:** Arnold Ondarza 1-800-533-3508

- The initial actions taken by the PRPs to excavate or decontaminate soils and cap the source areas as described above have reduced the potential exposure of nearby residents to site wastes.
- Additional protective activities include monitoring of attenuation in down-gradient wells, tracking the volume of contaminants recovered and incinerated, and tracking the volume of water recovered from trench and water wells.